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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/810,995 | 03/16/2001 | Kenneth V. Buer | 36956.0700/USM0007 | 7312 |

7590 10/19/2004

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| EXAMINER | |
|---|---|
| CORSARO, NICK | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2684 | |

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/810,995 | BUER, KENNETH V. | |
| | Examiner | Art Unit | |
| | Nick Corsaro | 2684 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *24 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-12 and 16-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16-19* is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *08/27/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## RESPONSE TO AMENDMENT

### *Response to Arguments*

1. Applicant's arguments filed 06/24/2004 have been fully considered but they are not persuasive.

The applicants features in the claims wherein a satellite ground station in communication with a satellite includes a control unit configured to modulate a transmission signal to said satellite in accordance with a theoretical P1 db point in correlation with a dc current sensor; an antenna unit configured to receive a communication from said satellite and to transmit said transmission signal to said satellite; and a means for two way signal communication between said control unit and said antenna unit, reads upon Moerder in view of Kintis as follows.

Moerder is discussing a method for calibration of a wireless transmitter in a satellite ground station in two-way communication with a satellite. Therefore, Moerder shows the limitation of "a satellite ground station in communication with a satellite" Moerder discusses that in a calibration mode the ground station the P1db compression point of the transmitter is set by a microprocessor to the proper gain for the transmission signals by using a power sensor at the transmit amplifier of the ground station via two-way communication between a control unit and the antenna unit. Therefore, Moerder shows the limitation of "a control unit configured to modulate a transmission signal to said satellite in accordance with a theoretical P1 db point in correlation with a sensor; an antenna unit configured to receive a communication from said satellite and to transmit said transmission signal to said satellite; and a means for two way signal communication between said control unit and said antenna unit".

As a result, Moerder is discussing features that show every limitation of the claim including setting the P1 db point based on information from a power sensor. Moerder shows that the power sensor is a sensor that detects the output power of the transmitter by coupling off part of the transmit signal and feeding it back to the power sensor. Moerder failed to show the correlation with a dc current sensor, therefore, Kintis was used to modify Moerder and show a dc current sensor. Kintis shows via coupling the output of a transmitter to a dc current sensor the reading can be sent back to control unit so the control unit can perform setting of the transmitter. Since both Moerder and Kintis are discussing controlling the output of a transmitter to operate in a linear fashion, the references are analogous, and one skilled in the art has motivation to combine, as shown by the background of Kintis.

Therefore, since the Applicants argued feature is written broad, and only states setting the transmitter by correlating with a dc current sensor, the feature is shown as obvious, via Moerder in view of Kintis. If the applicant means something more specific than that which is shown by Moerder in view of Kintis, such as "sensing the current coming from the DC sources via the amplifier bias network" than that feature should be written more specifically into the claim.

In conclusion , the argued features are either written to broad or are very similar to the cited references such that the features read upon the cited references.

***Information Disclosure Statement***

2. The information disclosure statement filed 08/27/2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to

be listed. It has been placed in the application file, but the information referred to therein has not been considered.

The US reference listed on the 1449 has been considered, however, foreign patents WO 00/25445 and EP 0 473 299 have not been submitted and have not been considered on the 1449. If the applicant would like these references considered copies of the references should be sent with the reply to this action, along with another 1449.

***Claim Objections***

3. The objection to the claim numbering from the last office action is hereby removed.

***Claim Rejections - 35 USC § 112***

**4.** The applicant has corrected claim 16. Therefore, the rejection of claim 16 under 35 U.S.C. 112 is removed.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moerder et al. (6,256,483) in view of Kintis et al. (6,662,018).

Consider claim 1, Moerder discloses a satellite ground station system, said system in signal communication with a satellite (see col. 5 lines 48-53). Moerder discloses a signal control unit configured to modulate a transmission signal to said satellite in accordance with a

theoretical P1 db point of said system, said P1 db point in correlation with a power sensor (see col. 2 lines 47-67, col. 3 lines 45-67, col. 4 lines 9-45, col. 4 lines 48-55, cp;/ 7 lines 41-67, col. 8 lines 1-67, and col. 9 lines 40-48). Moerder discloses an antenna unit configured to receive a communication from said satellite and to transmit said transmission signal to said satellite, and a means for two-way signal communication between said control unit and said antenna unit (see col. 5 lines 28-67, and col. 6 lines 1-60).

Moerder discloses correlating with power sensing (see col. 6 lines 51-60, col. 8 lines 47-67, col. 9 lines 1-47). Moerder, however, does not specifically disclose a dc current sensor. Kintis teaches dc current sensor (see col. 4 lines 49-67, col. 5 lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and have dc current sensor, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claim 2, Moerder discloses a satellite ground station system of the type capable of receiving and transmitting RF signals to a satellite, a transmitted RF signal having a transmission power level as determined by a signal control unit of said system (see col. 1 lines 36-67, col. 2 lines 9-46, col. 5 lines 48-53, and col. 7 lines 40-67). Moerder discloses said signal control unit varying the power level of said transmitted RF signal in accordance with a power sensing means such that a maximum transmission power level is determined by said temperature sensing means (see col. 2 lines 47-67, col. 3 lines 45-67, col. 4 lines 9-45, col. 4 lines 48-55, col. 7 lines 41-67, col. 8 lines 1-67, and col. 9 lines 40-48).

Moerder discloses correlating with power sensing means (see col. 6 lines 51-60, col. 8 lines 47-67, col. 9 lines 1-47). Moerder, however, does not specifically disclose a dc current sensing means. Kintis teaches dc current sensing means (see col. 4 lines 49-67, col. 5 lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and have dc current sensing means, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claim 3, Moerder discloses an uplink power control system for a satellite communication station (see col. 5 lines 27-33, col. 7 lines 41-67, col. 8 lines 1-46). Moerder discloses transceiving RF signals with a satellite (see col. 5 lines 28-67, and col. 6 lines 1-60). Moerder discloses said power control system comprising a control unit having a modem and a power sensing mechanism, said modem providing a signal for transmission to said satellite in accordance with said power sensing mechanism (see col. 8 lines 21-46, col. 7 lines 40-67, and col. 8 lines 1-67). Moerder discloses an antenna unit having an antenna for receiving said RF signal from said satellite and transmitting an RF signal to said satellite, said transmitted RF signal in accordance with said signal for transmission received from said modem of said control unit (see col. 5 lines 27-67 and col. 6 lines 1-60). Moerder discloses a signal transfer means between said control unit and said antenna unit (see col. 6 lines 12-60).

Moerder discloses correlating with power sensing mechanism (see col. 6 lines 51-60, col. 8 lines 47-67, col. 9 lines 1-47). Moerder, however, does not specifically disclose a dc current

sensing Mechanism. Kintis teaches dc current sensing mechanism (see col. 4 lines 49-67, col. 5 lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and have dc current sensing mechanism, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claims 8, Moerder discloses a method for signal control in a satellite ground station, said station of the type for transmitting and receiving signals between a satellite (see col. 5 lines 27-53). Moerder discloses receiving, at a transceiver unit of said station, a signal for satellite transmission from a control unit of said station (see col. 5 lines 65-67, and col. 6 lines 1-60). Moerder discloses detecting, at said control unit, a power level supplied to said transceiver unit in the presence of said signal for satellite transmission (see col. 6 lines 54-60, col. 8 lines 22-46). Moerder discloses determining a desired maximum signal power level of said signal based on said detecting step (see col. 4 lines 8-25, col. 2 lines 47-67, col. 7 lines 40-67, and col. 8 lines 1-67). Moerder discloses modulating said signal in accordance with said desired maximum signal power level; and transmitting said modulated signal from said transceiver unit to said satellite (see col. 6 lines 20-60, and col. 5-67).

Moerder discloses correlating with power level (see col. 6 lines 51-60, col. 8 lines 47-67, col. 9 lines 1-47). Moerder, however, does not specifically disclose detecting a dc current supplied to the transceiver. Kintis teaches sensing a dc current supplied to the transceiver (see col. 4 lines 49-67, col. 5 lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and detect a dc current supplied to the transceiver, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claims 4 and 5, the above combination discloses a dc current sensor in electrical communication with the RF power control device.

Consider claim 6, Moerder discloses determining a compression point comprises determining the change in power provided to said antenna unit (col. 4 lines 8-25, col. 2 lines 47-67, col. 7 lines 40-67, and col. 8 lines 1-67). Moerder discloses sampling the power and the temperature to set a P 1db compression point, however, does not specifically disclose detecting a DC current level of the signal. Kintis teaches detecting a DC current level of the signal (see col. 4 lines 55-67, col. 5 lines 1-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and detect a DC current level, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

Consider claim 7, Moerder disclose the signal transfer means comprises a cable (see col. 6 lines 1-20).

Consider claim 9, Moerder discloses determining step comprises determining a Pl db compression point (see col. 4 lines 8-25, col. 8 lines 1-67, and col. 9 lines 40-48).

Consider claims 10, 11, 12, Moerder discloses determining saturation levels for the compression point (see col. 4 lines 8-25, col. 5 lines 27-67, col. 6 lines 1-67, col. 7 lines 41-67 and col. 8 lines 1-67). Moerder does not specifically disclose correlating with a dc current.

Kintis teaches correlating with a dc current (see col. 4 lines 55-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Moerder, and detect a DC current level, as taught by Kintis, thus allowing a power control system that does not result in saturation, as discussed by Kintis (col. 1 lines 40-64).

### *Allowable Subject Matter*

7. Claim 16-19, are allowed.

### *Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nick Corsaro whose telephone number is 703-306-5616. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nick Corsaro

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